

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



BUREAU OF BRIDGE DESIGN

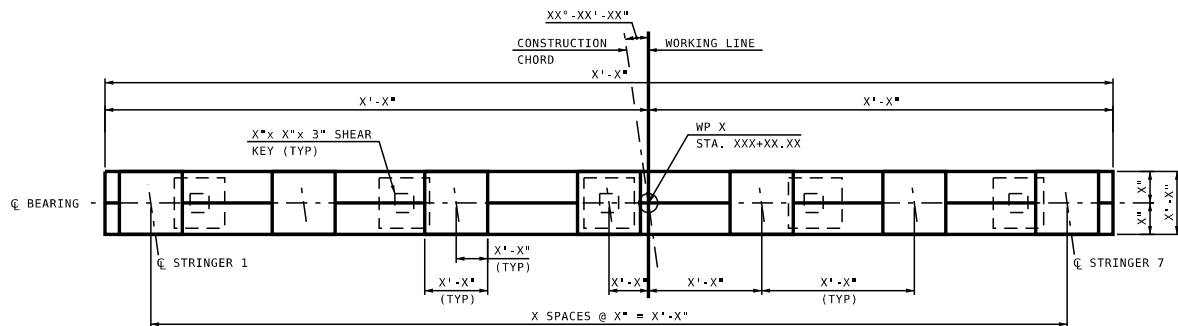


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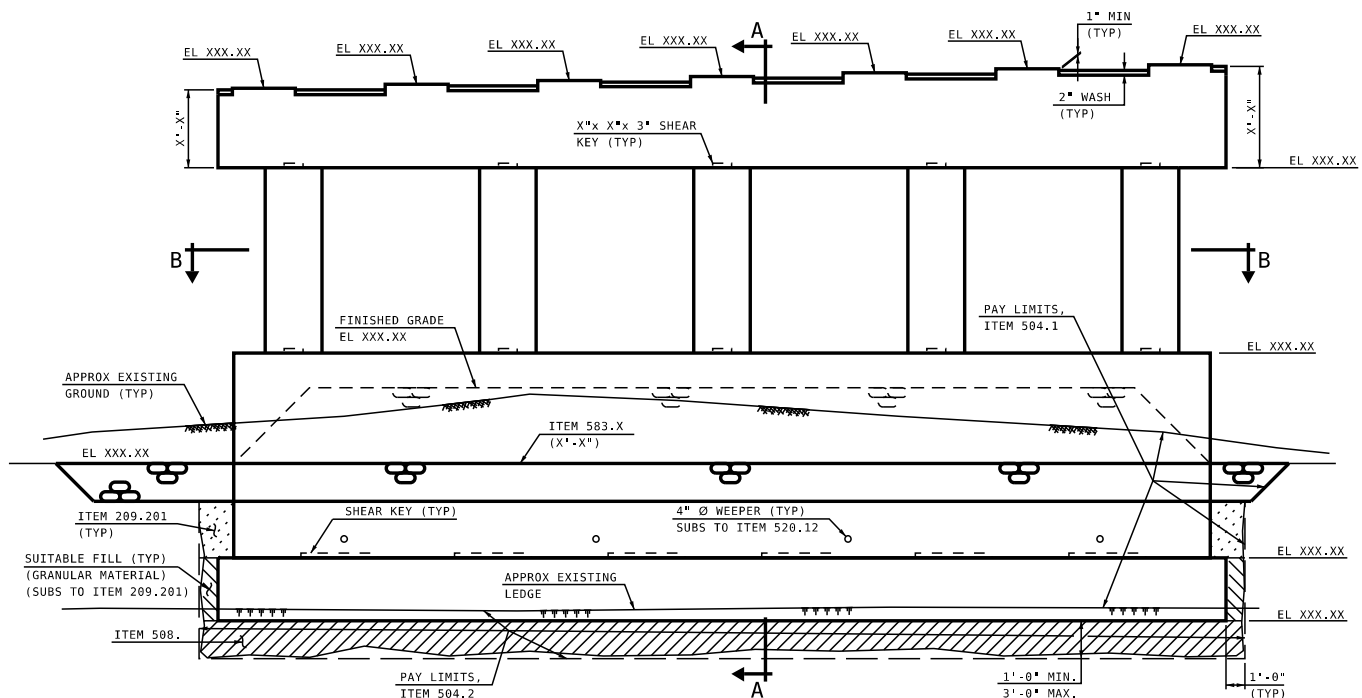
SUBSTRUCTURE DETAILS -
COLUMN PIER

DATE REVISED:

7/31/2023



SAMPLE PLAN - PIER CAP



SAMPLE ELEVATION

MODIFY TO
FIT PROJECT

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



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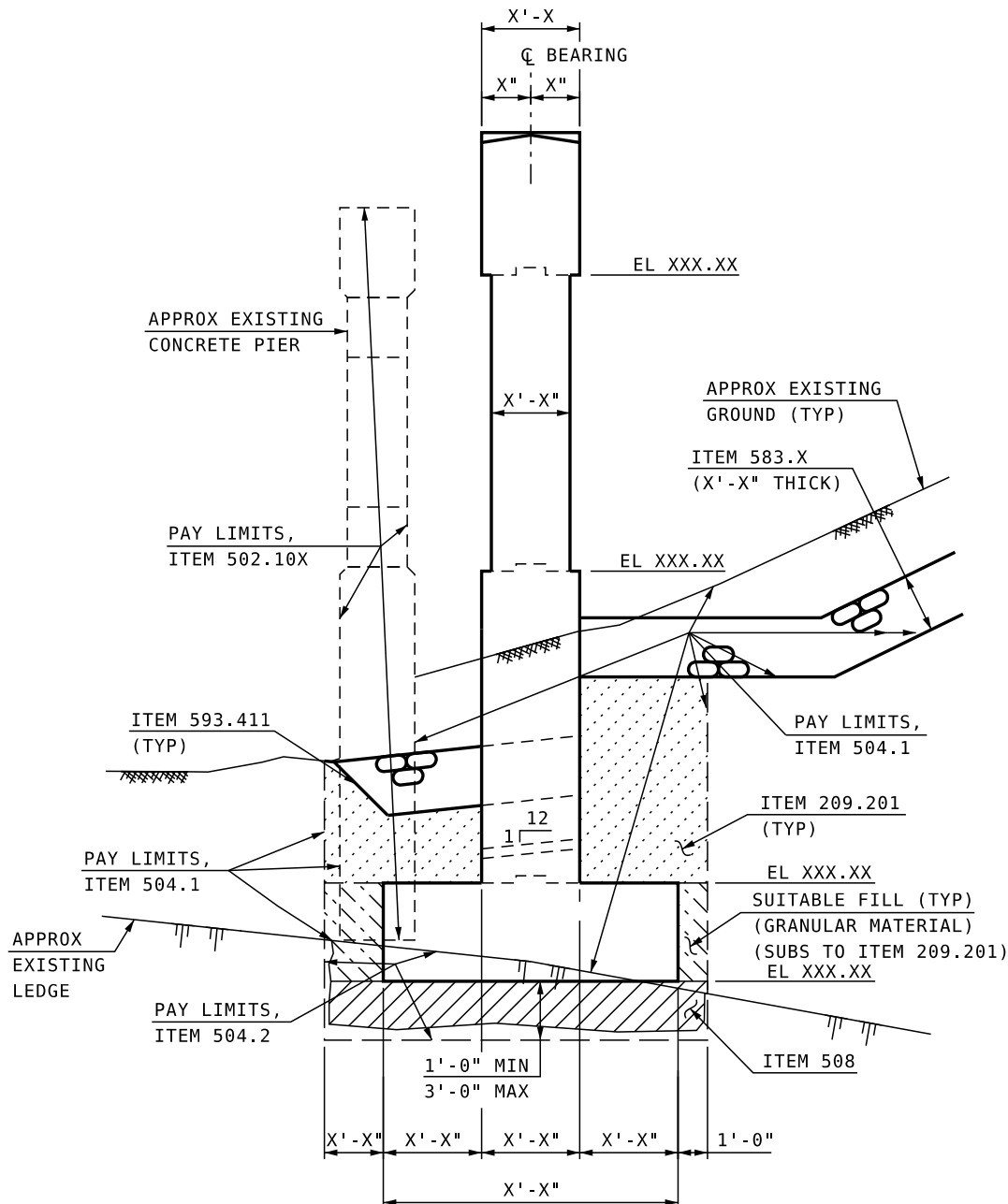


DESCRIPTION:

SUBSTRUCTURE DETAILS -
COLUMN PIER SECTION A-A

DATE REVISED:

7/31/2023



**SAMPLE COLUMN PIER
SECTION A-A**

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FIT PROJECT

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

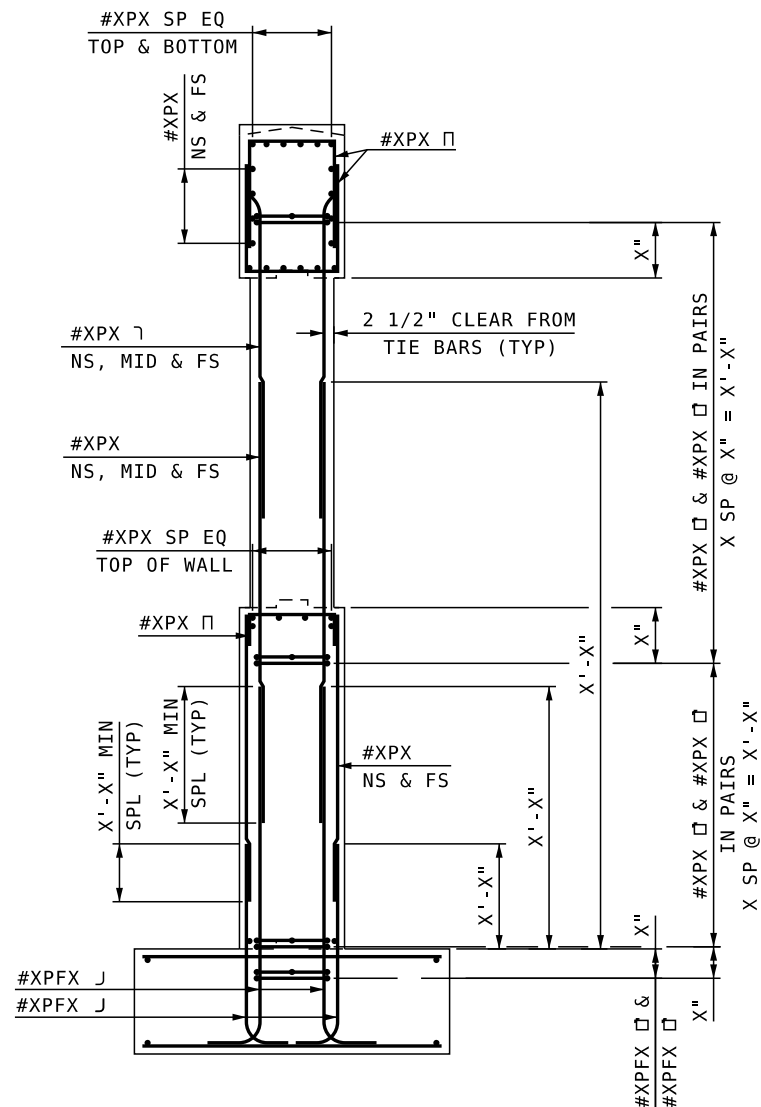


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DESCRIPTION: SUBSTRUCTURE DETAILS -
COLUMN PIER SECTION A-A REINFORCEMENT

DATE REVISED:
2/8/2016



**SAMPLE COLUMN PIER
SECTION A-A REINFORCEMENT**

MODIFY TO
FIT PROJECT

New Hampshire
DOT
Department of Transportation

2/8/2016



**MODIFY TO
FIT PROJECT**

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



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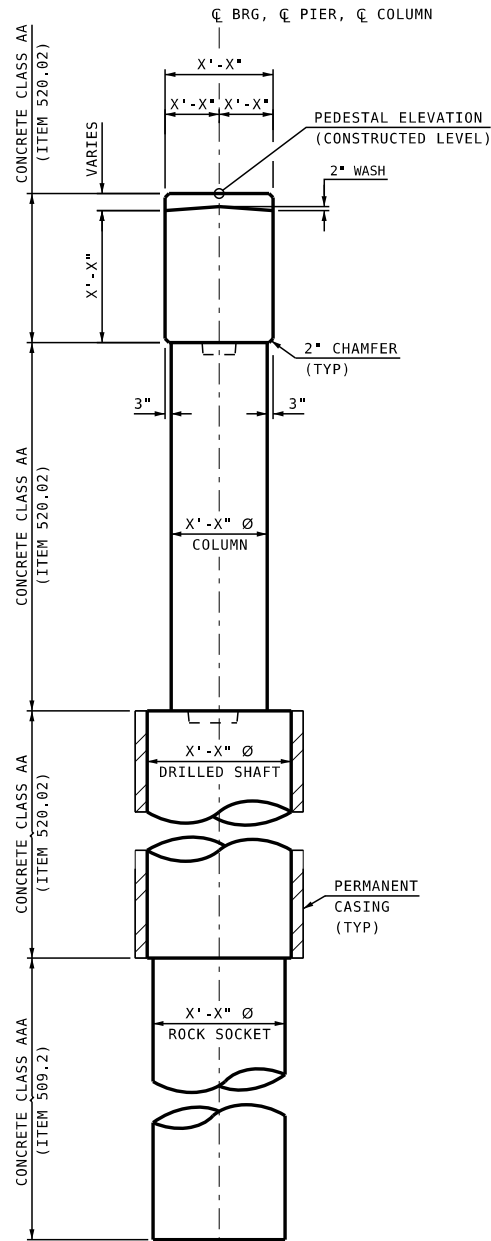


DESCRIPTION:

SUBSTRUCTURE DETAILS -
COLUMN PIER

DATE REVISED:

2/8/2016



**PIER COLUMN
SECTION**

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NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



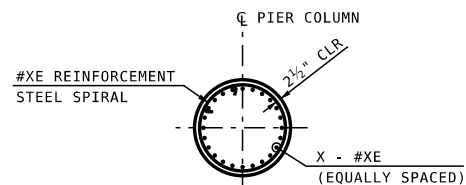
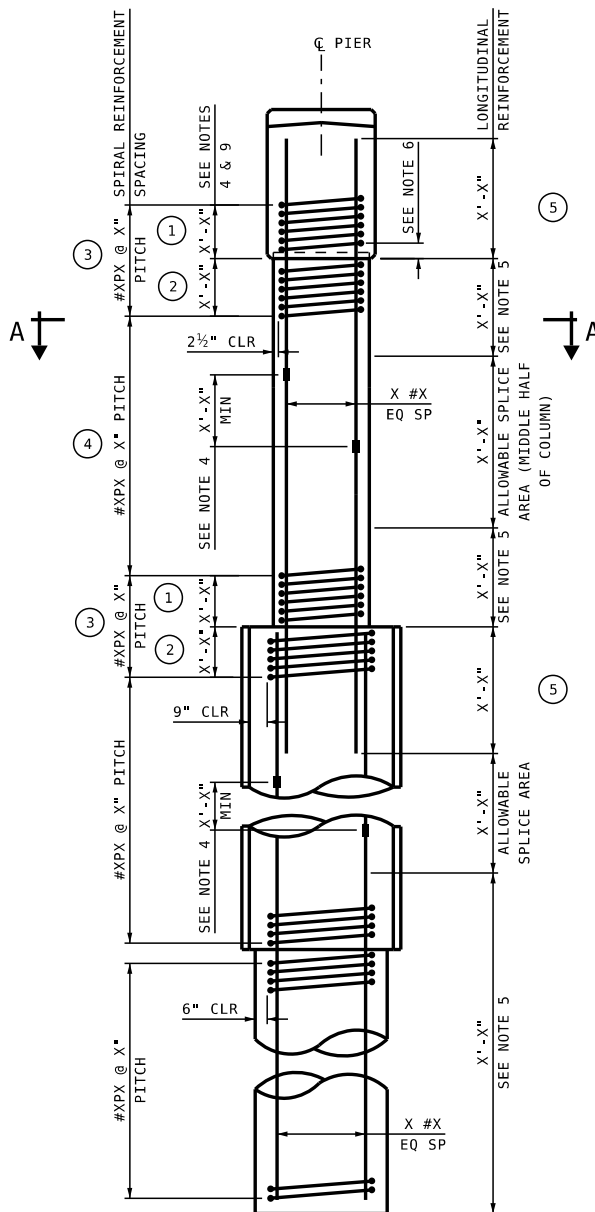
BUREAU OF BRIDGE DESIGN



DESCRIPTION: **SUBSTRUCTURE DETAILS -
COLUMN PIER SEISMIC ZONE 1 REINFORCEMENT**

DATE REVISED:
2/8/2016

**MODIFY TO
FIT PROJECT**



SECTION A-A (PIER COLUMN)

**SAMPLE COLUMN PIER
REINFORCEMENT REQUIREMENTS
SEISMIC ZONE 1 ($0.10 \leq SD1 \leq 0.15$)**

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



BUREAU OF BRIDGE DESIGN



DESCRIPTION:

SUBSTRUCTURE DETAILS -
SHAFT AND COLUMN NOTES

DATE REVISED:

7/31/2023

MODIFY TO
FIT PROJECT

NOTES TO DESIGNER:

FOR INFORMATION ON LOCATIONS ① ② ③ ④ ⑤
SEE AASHTO SECTIONS 5.10.4.2, 5.11.2, 5.11.3, & 5.11.4

SAMPLE NOTES:

1. COLUMN REINFORCEMENT SHOWN IS TYPICAL FOR ALL COLUMNS.
2. LAP SPLICE FOR TOP AND BOTTOM PIER CAP REINFORCEMENT SHALL BE ALTERNATED SUCH THAT ONLY ONE HALF OF BARS ARE SPLICED ON EACH SIDE OF PIER CENTERLINE.
3. TERMINATE SPIRAL LAP SPLICES WITH 135° HOOKS AND 5" EXTENSIONS.
4. ALTERNATE AND STAGGER SPLICES SO THAT NO MORE THAN 50% OF REINFORCEMENT IS SPLICED AT ONE LOCATION. CONTRACTOR MAY USE COUPLER-CONNECTORS IN THIS AREA. COUPLERS SHALL DEVELOP AT LEAST 125% OF SPECIFIED YIELD STRENGTH F_y OF THE REINFORCING BAR.
5. LONGITUDINAL REINFORCEMENT SHALL NOT BE SPLICED IN THIS AREA.
6. SPIRAL REINFORCEMENT TO BE DISCONTINUED 2" ABOVE AND 2" BELOW EACH OF THE TWO BOTTOM LAYERS OF PIER CAP REINFORCEMENT AND TERMINATED WITH DOUBLE TURNS. IN ADDITION, SPIRAL TO BE INCORPORATED WITH A 135° HOOK AND 5" EXTENSION.
7. ALL REINFORCEMENT IN DRILLED SHAFT SHALL BE PAID FOR UNDER ITEM 509.2. ALL OTHER REINFORCEMENT IS PAID FOR UNDER ITEM 544. COST OF COUPLER-CONNECTORS SPLICES SHALL BE SUBSIDIARY TO ITEM 544.

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



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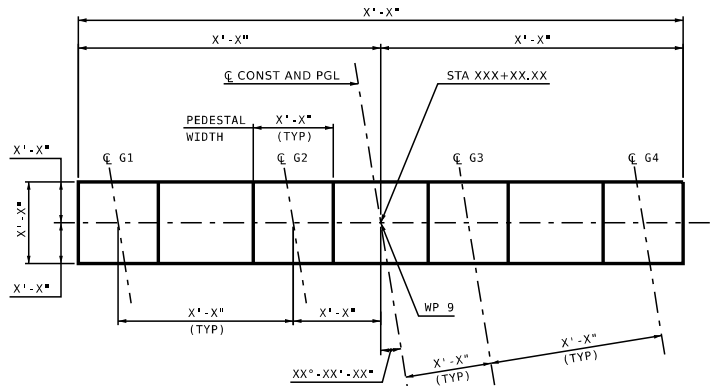


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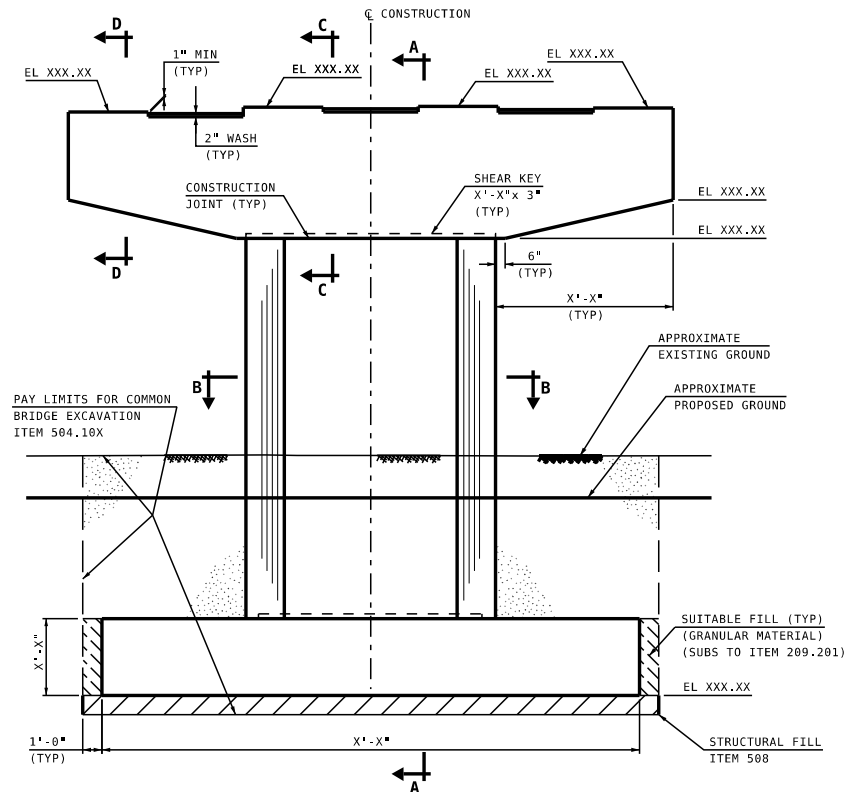
SUBSTRUCTURE DETAILS -
HAMMERHEAD PIER

DATE REVISED:

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SAMPLE PLAN



SAMPLE ELEVATION

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NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



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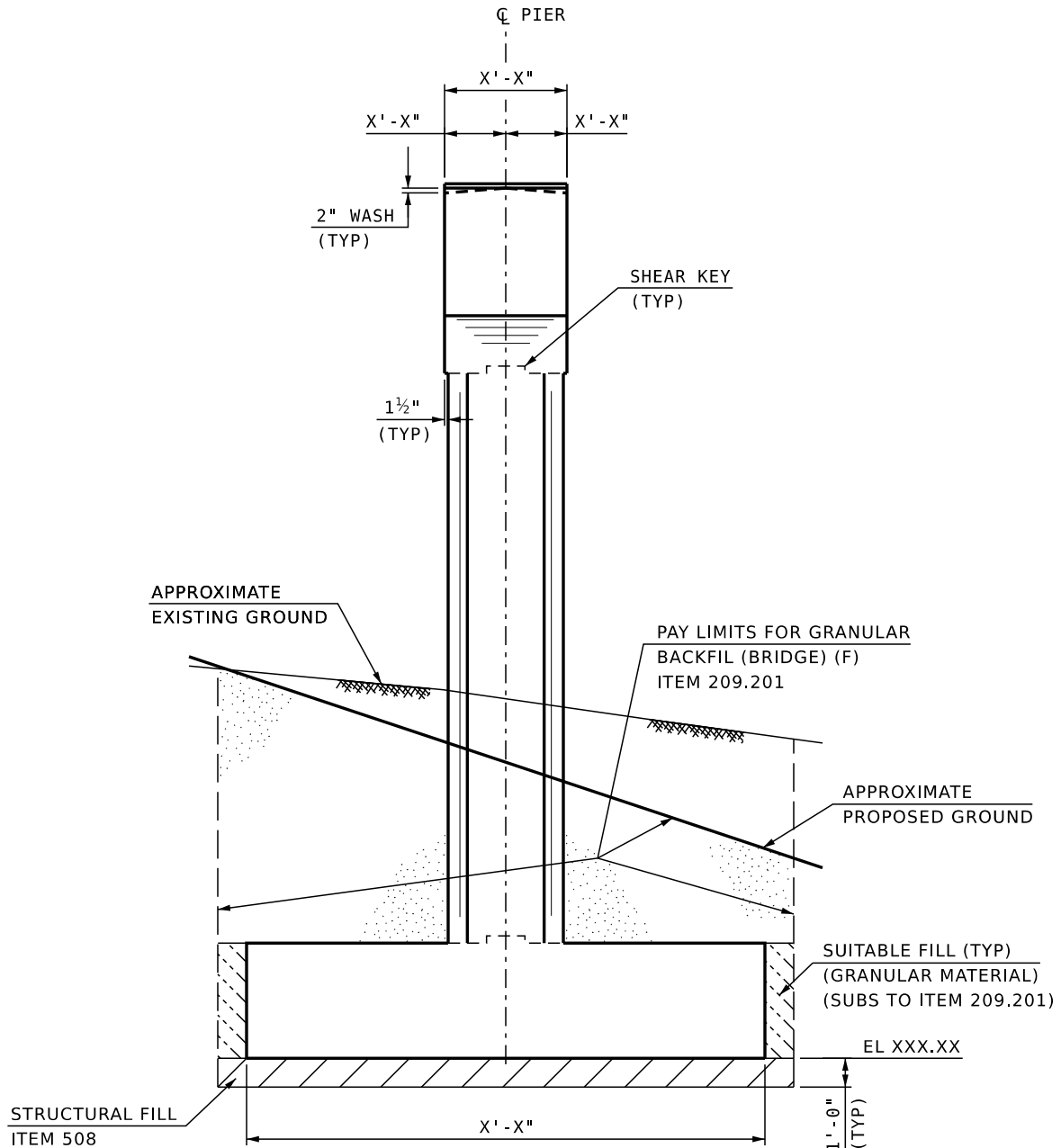


DESCRIPTION:

SUBSTRUCTURE DETAILS -
HAMMERHEAD PIER SECTION A-A

DATE REVISED:

7/31/2023



**SAMPLE HAMMERHEAD PIER
SECTION A-A**

MODIFY TO
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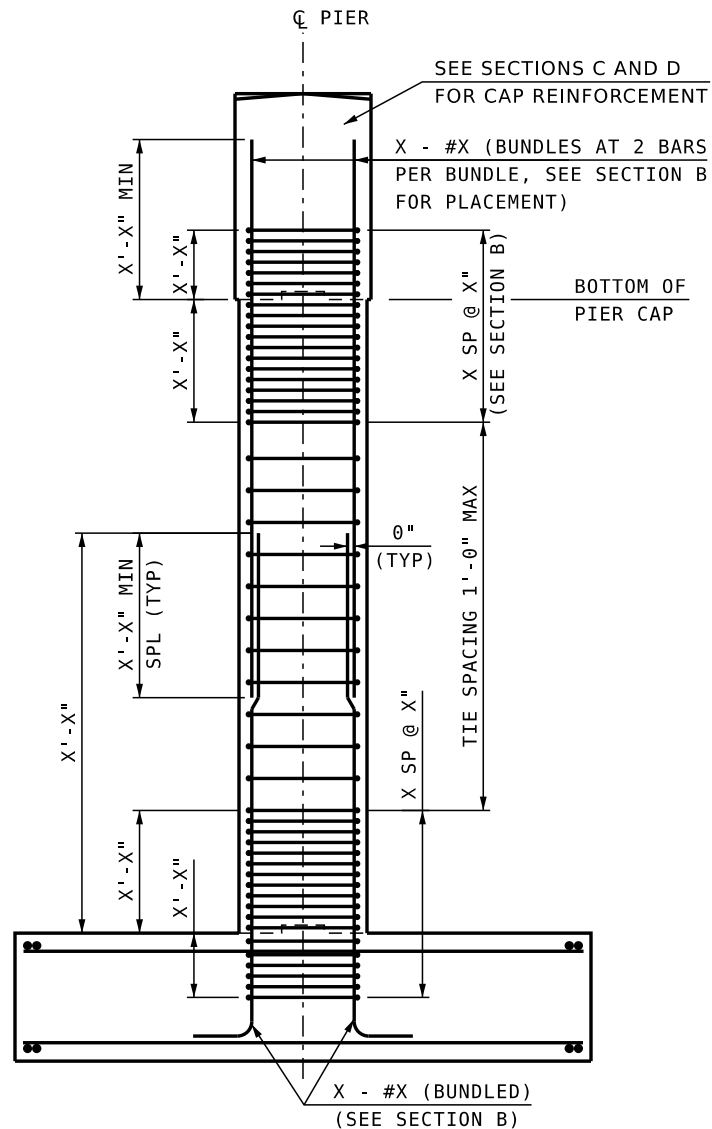


BUREAU OF BRIDGE DESIGN



DESCRIPTION: SUBSTRUCTURE DETAILS -
HAMMERHEAD PIER SECTION A-A REINFORCEMENT

DATE REVISED:
2/8/2016



**SAMPLE HAMMERHEAD PIER
SECTION A-A REINFORCEMENT**

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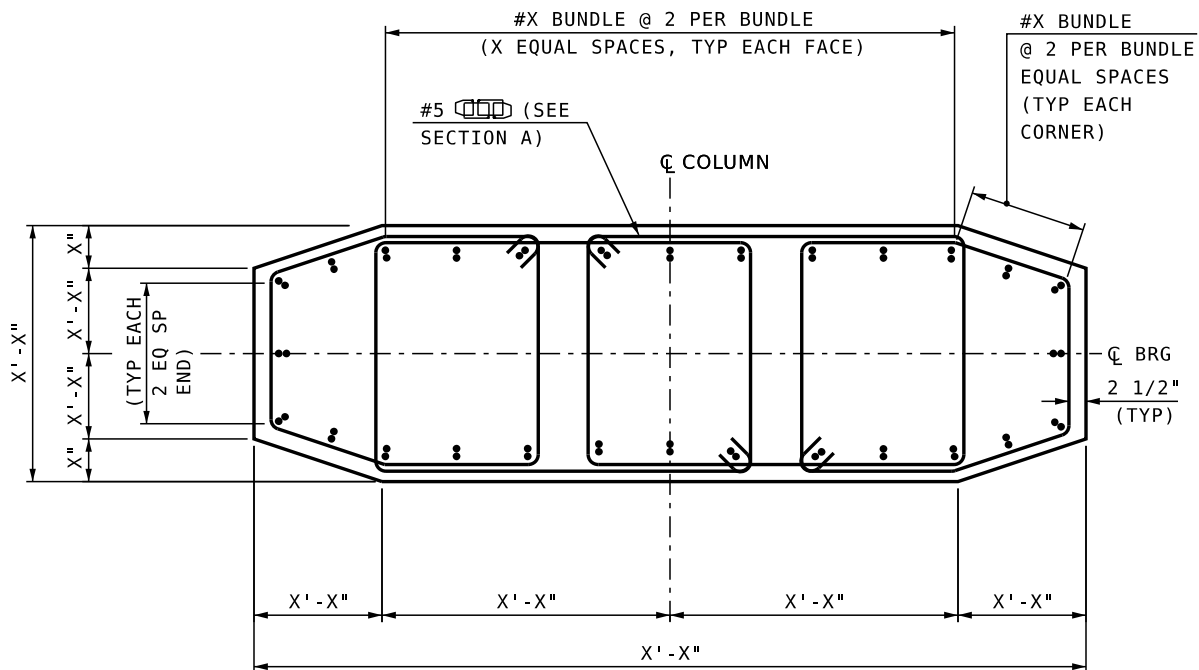


BUREAU OF BRIDGE DESIGN



DESCRIPTION: SUBSTRUCTURE DETAILS -
HAMMERHEAD PIER SECTION B-B

DATE REVISED:
2/8/2016



SAMPLE HAMMERHEAD PIER
SECTION B-B

MODIFY TO
FIT PROJECT

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

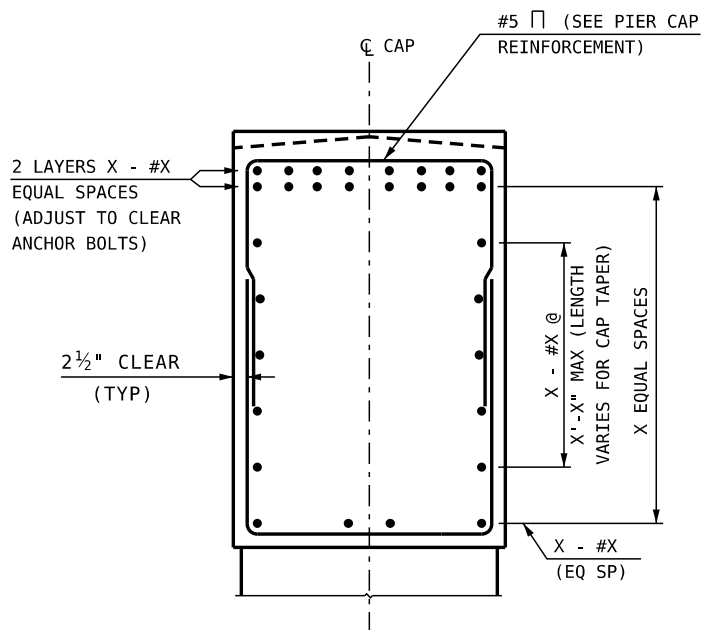


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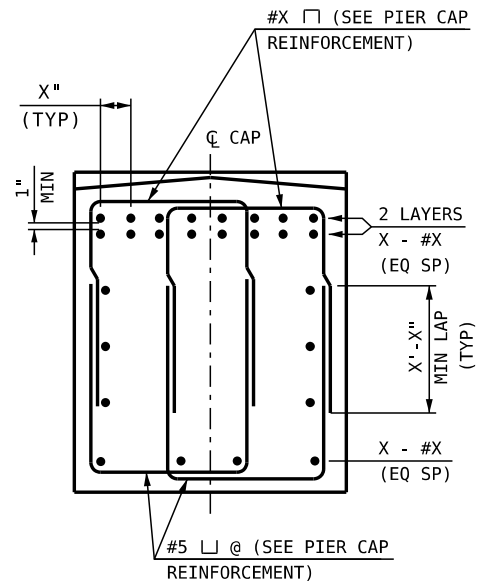


DESCRIPTION: SUBSTRUCTURE DETAILS -
HAMMERHEAD PIER SECTIONS C-C & D-D

DATE REVISED:
7/31/2023



**SAMPLE HAMMERHEAD
PIER SECTION C-C**



**SAMPLE HAMMERHEAD
PIER SECTION D-D**

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NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



BUREAU OF BRIDGE DESIGN

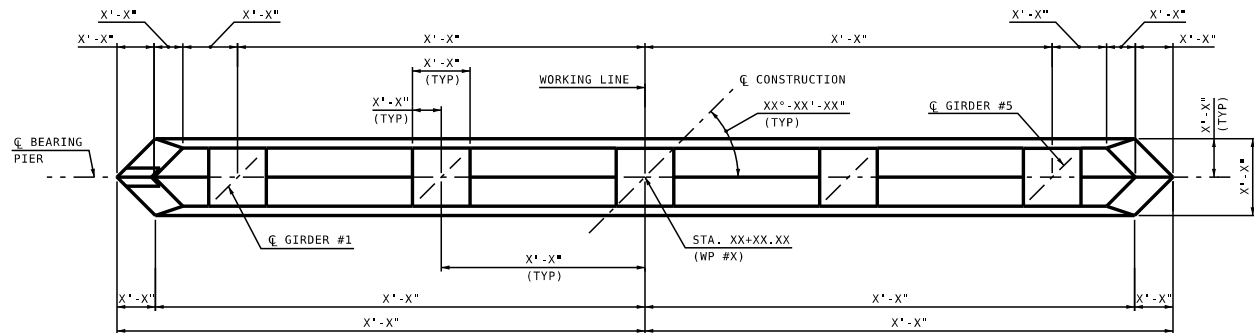


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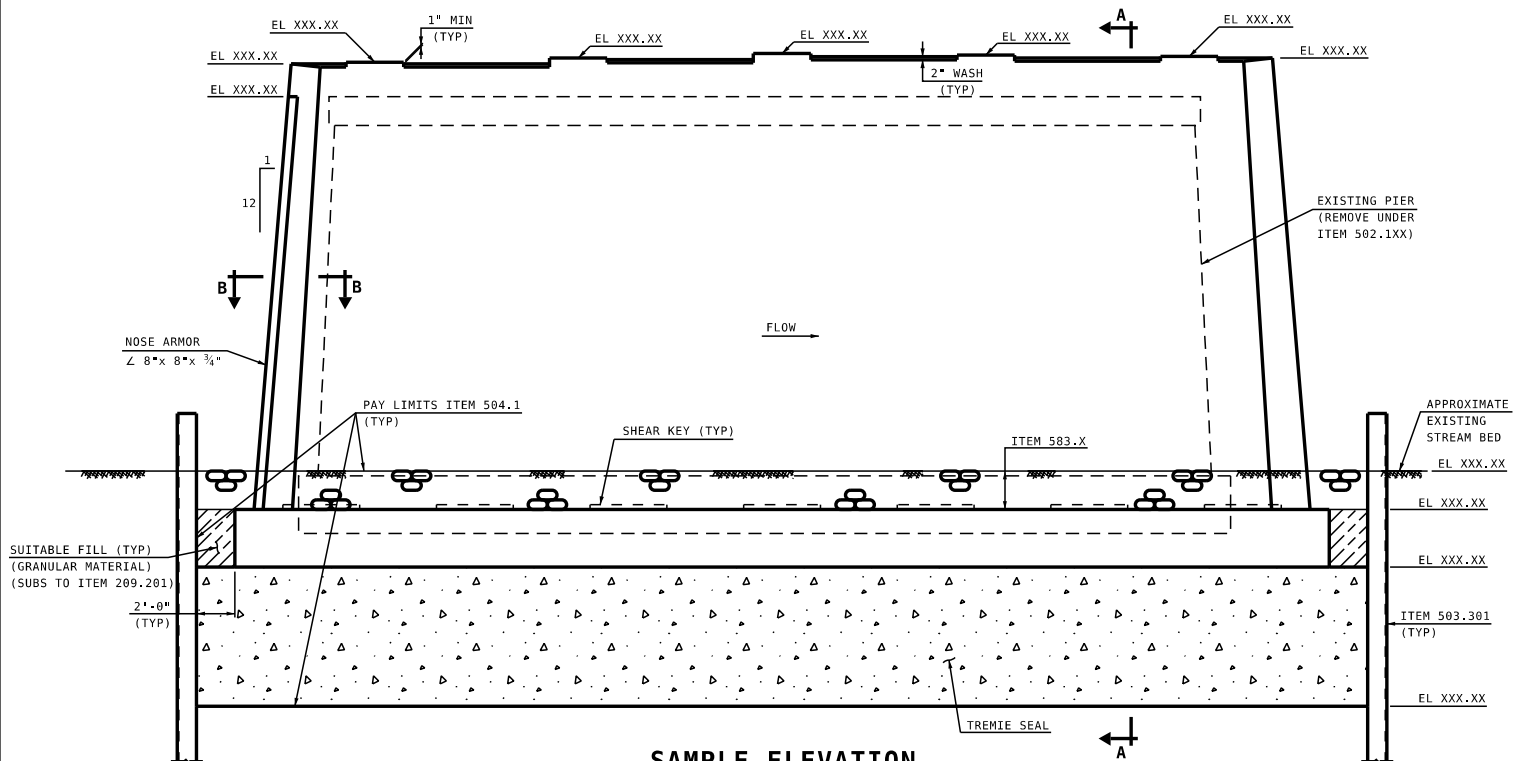
SUBSTRUCTURE DETAILS - WALL PIER

DATE REVISED:

7/31/2023



SAMPLE PLAN



SAMPLE ELEVATION

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FIT PROJECT**

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



BUREAU OF BRIDGE DESIGN

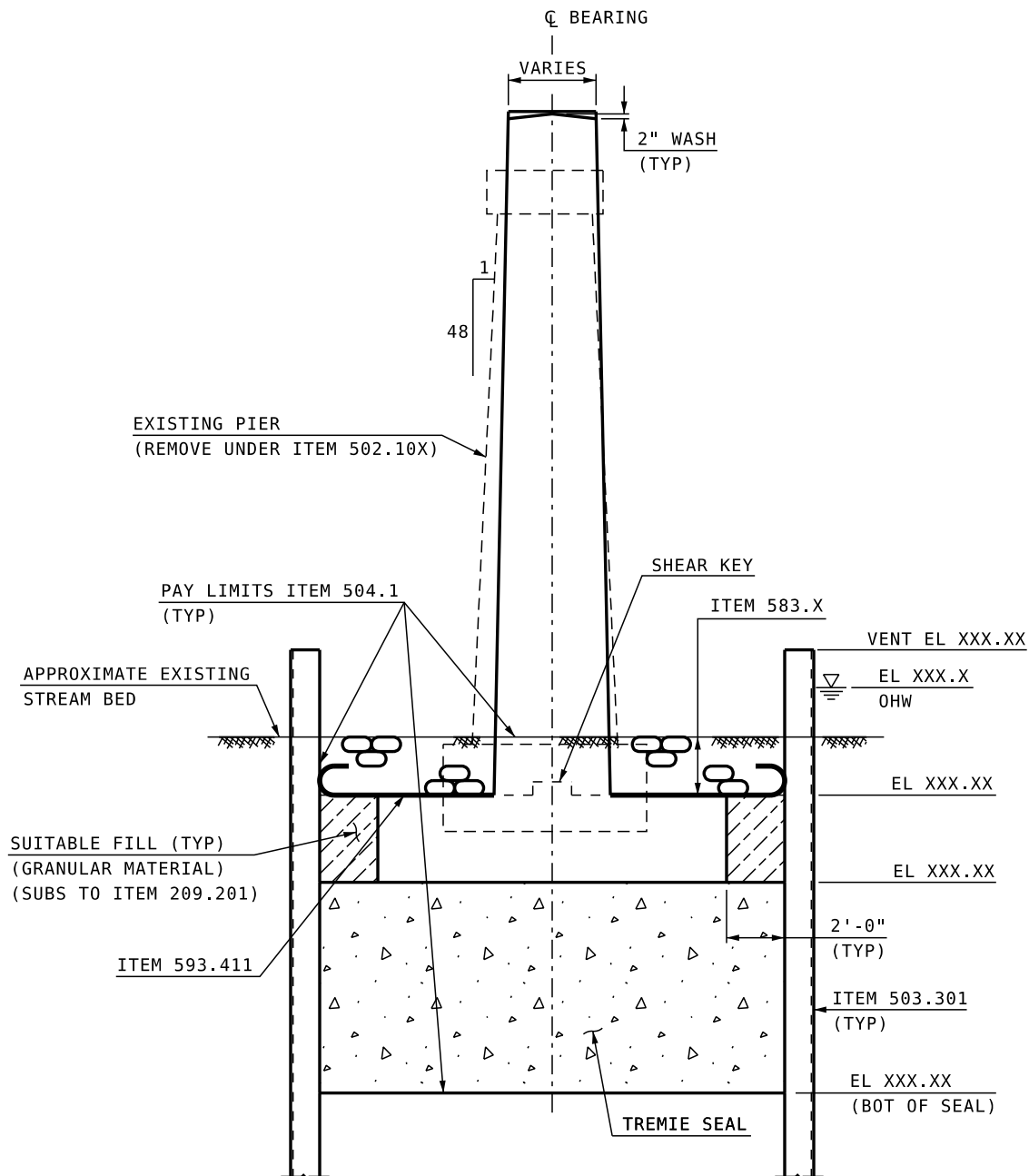


DESCRIPTION:

SUBSTRUCTURE DETAILS -
WALL PIER SECTION A-A

DATE REVISED:

7/31/2023



**SAMPLE WALL PIER
SECTION A-A**

MODIFY TO
FIT PROJECT

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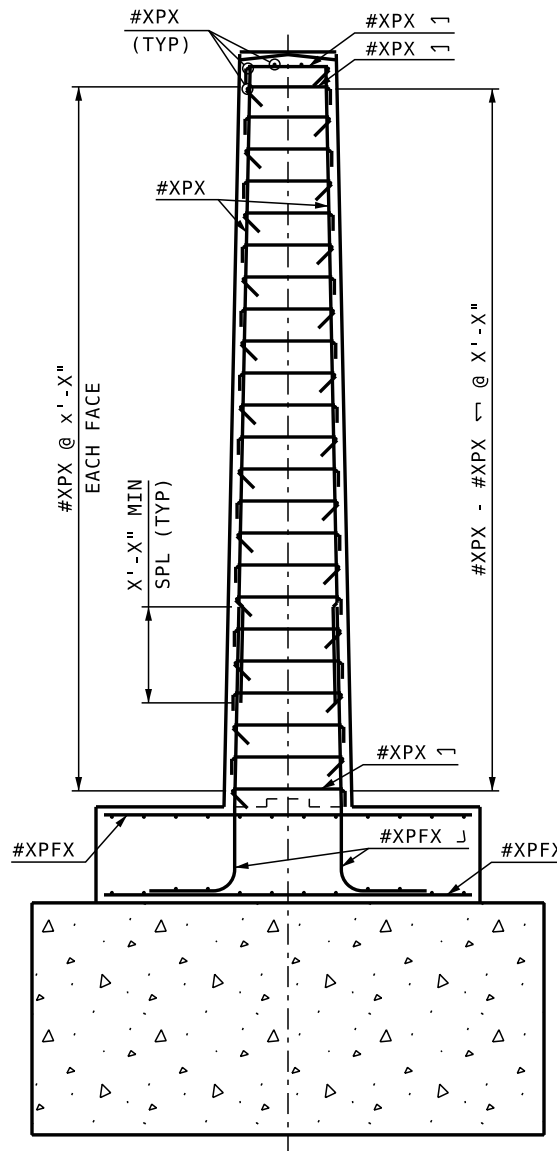


BUREAU OF BRIDGE DESIGN



DESCRIPTION: SUBSTRUCTURE DETAILS -
WALL PIER SECTION A-A REINFORCEMENT

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**SAMPLE WALL PIER
SECTION A-A REINFORCEMENT**

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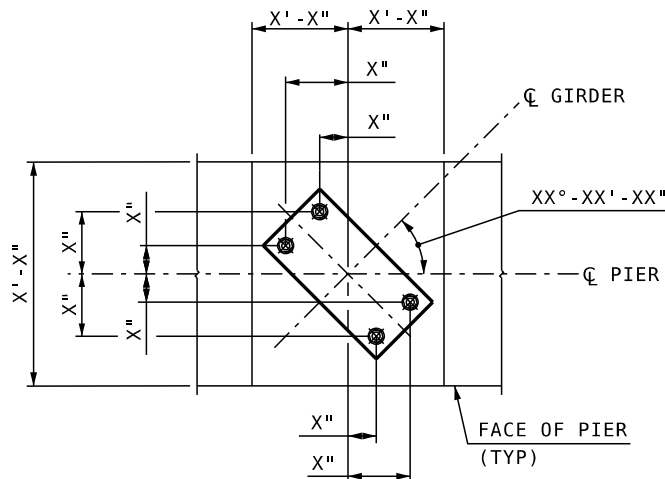


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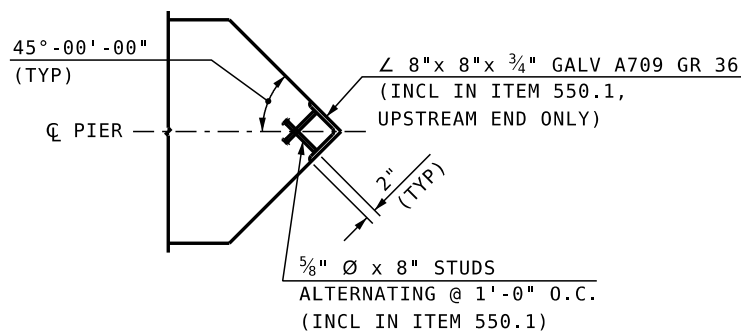
SUBSTRUCTURE DETAILS -
PIER DETAILS

DATE REVISED:

7/31/2023



ANCHOR BOLT LAYOUT AT PIER



PIER NOSE ARMOR

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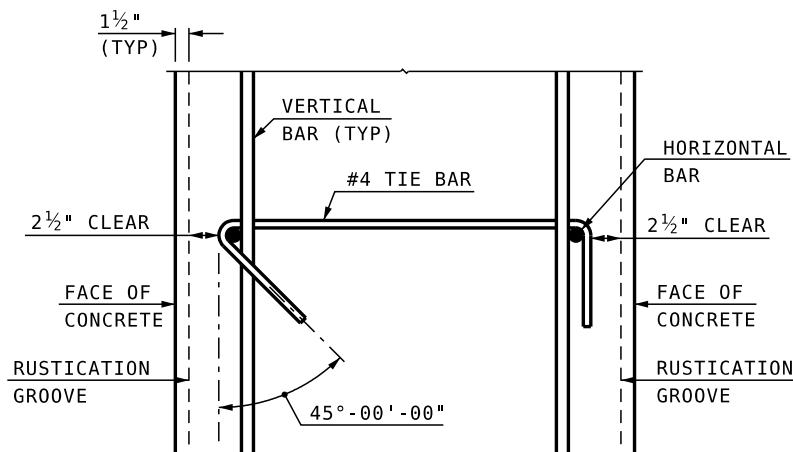


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SUBSTRUCTURE DETAILS -
PIER REINFORCING DETAILS

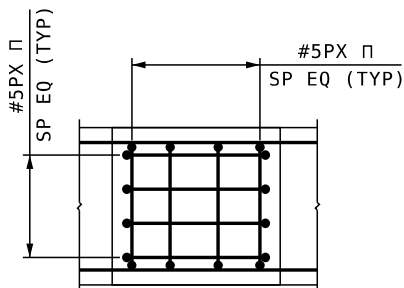
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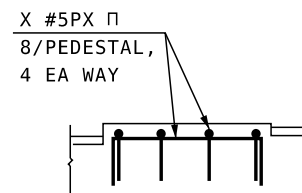


TYPICAL TIE BAR DETAIL

NTS



PEDESTAL REINFORCEMENT PLAN



PEDESTAL REINFORCEMENT ELEVATION

MODIFY TO
FIT PROJECT